

# **Etherlight Browser User Manual**

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# What is Etherlight Browser?

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The Etherlight Browser is a free software designed to provide a fully featured and innovative remote configuration and monitoring solution for your lighting rig. Working with our Ethernet/DMX Gateways, the Browser allows you to

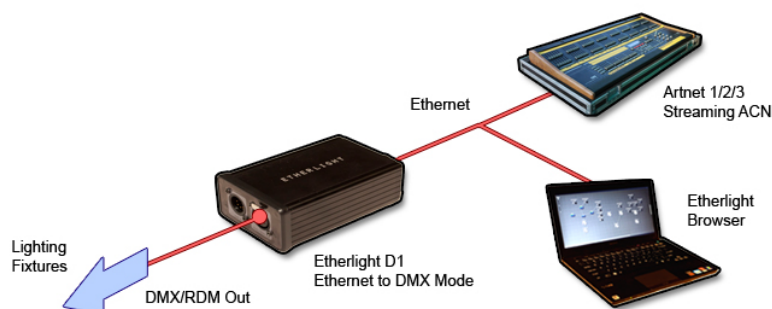
1. Choose your DMX input and output modes
2. Convert Ethernet <-> DMX
3. Visually configure your rig over RDM
4. Monitor and be automatically alerted of problems in your rig over RDM

## Where does it go in my rig?

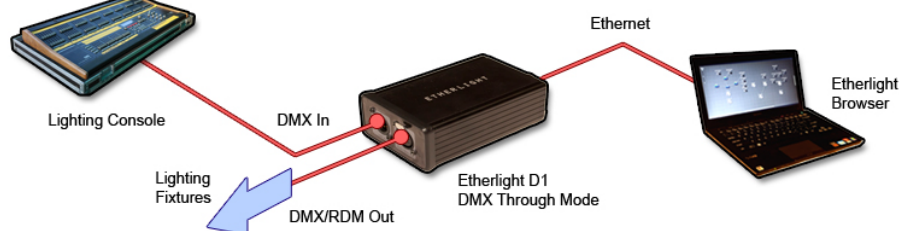
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Etherlight Ethernet/DMX Gateways are easy to setup and integrate into your existing installation in different modes, giving you additional features and control over your rig with minimum fuss.

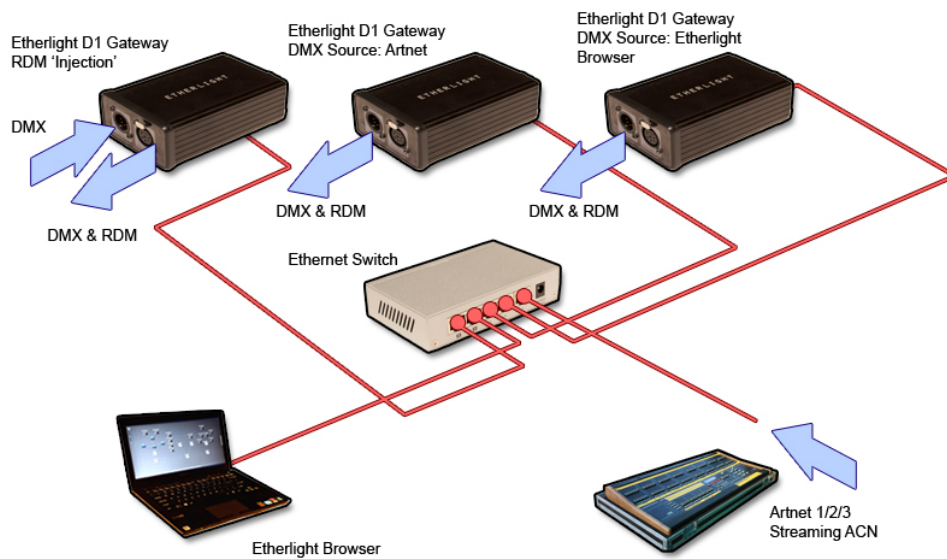
Easily convert the ArtNet or sACN output from your lighting desk into DMX feeding into your moving heads, with an additional monitoring component from your laptop via RDM.



Use the dongle in DMX-through mode and put it between your lighting desk and fixtures, with added RDM to monitor your fixtures from your laptop.



The dongles are very versatile, and can easily scale to large rigs. Simply plug them into Ethernet switches, and from one laptop, access multiple units from anywhere in the world simultaneously.



## Where can I download it?

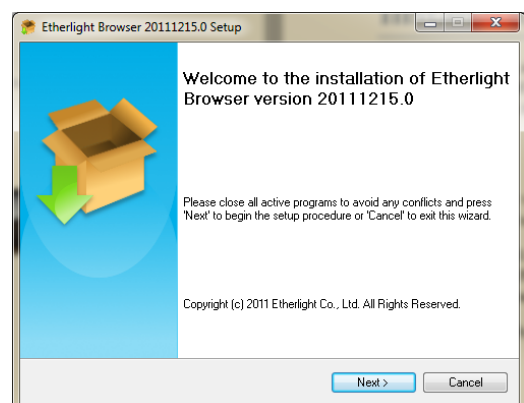
The Etherlight Browser software is available for download online from <http://www.etherlight.com/products/etherlight-browser>

## Installation and Network Set Up

Open the installation .exe file and follow the wizard to install the software. Microsoft .NET Framework 4 is required on your computer. If you do not already have this installed, you will be directed to a link where you can download and run the .NET Framework installer.

Alternatively, you may get it here:

<http://www.microsoft.com/download/en/details.aspx?id=24872>



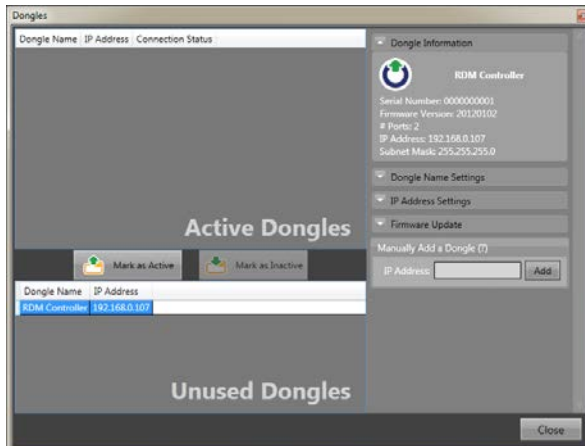
## Quick Start

## Launching Browser

Remember to physically connect your dongle to your computer or network! Get going in three easy steps:

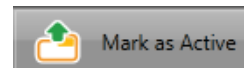
1. **Click on the “Dongles” button**

The software will automatically detect all dongles physically connected to the network. They will appear in the “Unused Dongles” list.



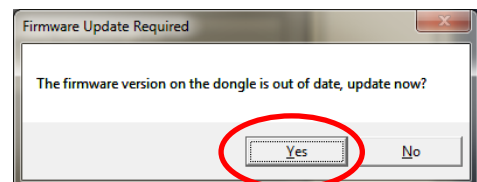
2. **Mark your desired dongle as “Active”**

This will display the dongle’s ports on the screen. The number of port icons you see will correspond to the number of universes available in the model that you have.



The dongle will move to the Active Dongles section. Its connection status should change to “Connected”. If this is not the case, see the next section on IP Addressing.

You may be asked to update the firmware on your dongle if there is a newer version bundled with the Browser software you are using.



3. **Close the window. That’s it!**

You are now ready to...

1. **Do Ethernet <-> DMX conversion**

Hover over the port icon and click on the “Settings” button on the pop-up menu.



2. **Manage your RDM devices**

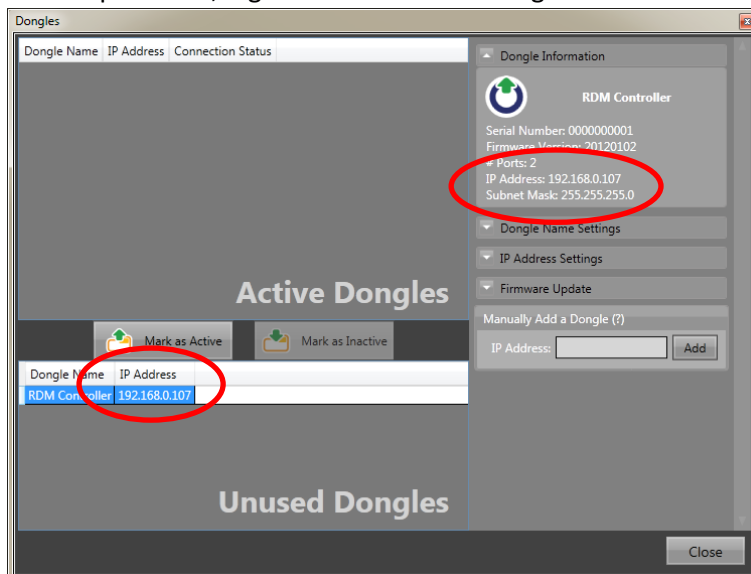


Hover over the port icon and click “Discover” to discover all the connected RDM devices. To view information about devices, hover over the devices icons and select from “Settings”, “Sensors” or “Status Messages”. Locate the real device with “Identify”, which will cause the device to respond. Remotely patch the devices from the universe with the “Patch” button.

Have a play around to find a range of other useful features to help you configure and monitor your rig more easily.

## IP Addressing

Communications between the computer and the dongle is over IP. This is the same for all lighting control protocols, e.g. Art-Net and Streaming ACN.



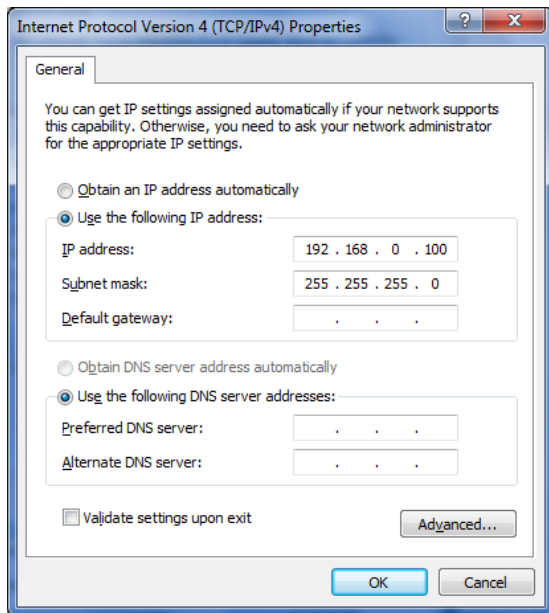
Each device on the network must have its own unique IP address. This particular dongle has 192.168.0.107 as the current IP address of the dongle.

Two devices (e.g. a computer and a dongle) directly connected to each other, whether via an Ethernet cable or over a switching hub, must be in the same IP address range (known as the “subnet”).

If you find that when you mark a dongle as active, it does not connect, you may need to check if the dongle’s and computer’s IP addresses are within the same range, or subnet.

### Computer’s IP address

This dongle is on 192.168.0.107 with a subnet mask of 255.255.255.0. This means that the computer’s IP address should be from 192.168.0.x (where x is 1 to 254, except 107 because it would be a duplicate) to connect to it. For example, you may set 192.168.0.100 below in Windows:



#### To get to this window:

1. Open *Control Panel*
2. **Windows Vista/7**  
Go to "*Network and Sharing Center*" or "*View network status and tasks*" then "*Change adaptor settings*"
- Windows XP**  
Go to "*Network Connections*"
3. Right click on the adaptor that the dongle is physically connected to, and choose "*Properties*". Usually this is the "*Local Area Connection*".
4. Double click on "*Internet Protocol Version 4 (TCP/IPv4)*"

The table below lists some common IP ranges. The last set of number in an IP address cannot be 255.

IP Range	Subnet Mask	IPs in the same range	Description
192.168.0.x	255.255.255.0	192.168.0.1 to 192.168.0.254	A common non-Internet range in small networks.
10.x.x.x	255.0.0.0	10.0.0.1 to 10.255.255.254	A common non-Internet range in larger networks. Art-Net secondary range.
2.x.x.x	255.0.0.0	2.0.0.1 to 2.255.255.254	Art-Net primary range. Do not use on Internet connected systems.

### Dongle's IP address

To change the dongle's IP address, select the dongle and expand "IP Address Settings".

There are several options with configuring the IP addresses of the dongle.

#### 1. Manually Configured

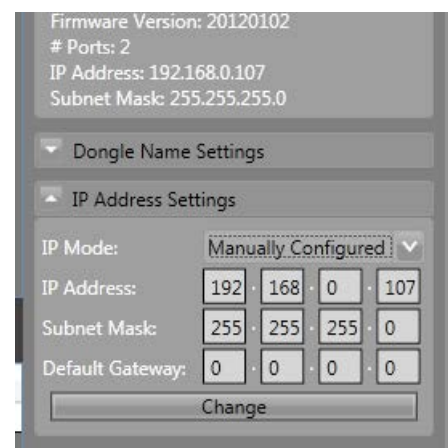
You can manually assign the IP address, subnet mask and gateway of the dongle to be on the same ranges as your private network.

#### 2. DHCP

This option will tell your network to automatically assign an IP address to the dongle which will not conflict with another device on the network. *We do **not** recommend this outside testing scenarios.*

#### 3. ArtNet Primary

This option automatically assigns an ArtNet IP to the dongle in the 2.x.x.x range to be compatible with other ArtNet 2.x.x.x devices in your rig.



#### **4. ArtNet Secondary**

This option automatically assigns an ArtNet IP to the dongle in the 10.x.x.x range to be compatible with other ArtNet 10x.x.x devices in your rig.

Once the IP address is changed, the dongle will automatically be removed from the list of Active Dongles as it will restart itself. You will need to manually mark it as active to view it on the screen again.



# Comprehensive Guide

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## CONFIGURING THE DONGLE

### Adding a new dongle automatically

Click on the “Dongle” button to open the Dongle Management window. All connected dongles will automatically be detected and added to the “Unused Dongles” list.

### Adding a new dongle manually

Simply type in the IP address of the dongle and click “Add”.

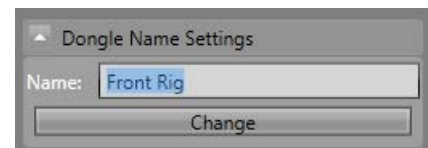
### Active and Unused dongles

You may have more than one dongle physically connected to different parts of your rig, but may not necessarily need to view or configure the entire rig at the same time. In this case, you can mark some dongles as “Unused” in the Dongle Management window, so that they do not appear on the screen until you need them.

To view and use the dongles on the screen, just click “Mark as Active”.

### Naming the dongle

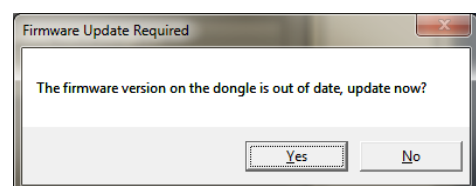
Easily identify a dongle on the screen by renaming it something relevant. You can do this from the “Dongle Name Settings” expander in the Dongles window.



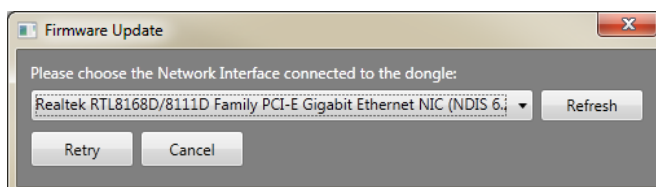
### Updating the dongle's firmware

Each new release of the Browser software may also come bundled with a firmware release for the dongle. Updating your dongle is a simple button click under the “Firmware Update” tab in the Dongle Management window. The software will attempt to automatically detect your dongle and update it to the latest version.

When you mark a dongle as “active”, if the firmware on the dongle is too old and no longer supported by the version of the Browser software you are using, you will be prompted to update.



If it fails to detect how your dongle is connected (for example, directly through your computer's LAN network card, or through a network switch which your computer is connected to wirelessly), a pop-up will appear, from which you can manually select the appropriate network card connection.



## CONFIGURING DMX

### Configure DMX modes

Hover over the port icon and click on the settings. There are several modes available for you to choose from.



**1. Browser -> DMX**

This option allows you to use the built-in DMX faders in the Browser when setting up and testing the rig.

**2. DMX-Through**

This option does exactly what it says on the tin! The dongle will take a DMX input from your favourite lighting console (for example), and can inject RDM onto the outgoing DMX to the fixtures.

**3. ArtNet -> DMX**

This option allows you to convert an ArtNet stream and output it as DMX. The dongle supports Artnet I/II/III.

**4. DMX -> ArtNet**

This option does the opposite of the previous, and takes in a DMX stream and converts it to an ArtNet stream over Ethernet.

**5. sACN -> DMX**

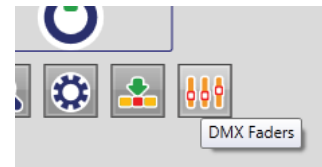
This option allows you to convert a Streaming ACN stream and output it as DMX. The dongle supports the final/ratified E1.31 standard.

**6. DMX -> sACN**

This option does the opposite of the previous and takes in a DMX stream and converts it to a Streaming ACN stream over Ethernet.

### Simple DMX faders

The Browser software has a set of basic faders built-in for easy control of the fixtures. This may be particularly useful for technicians who are setting up the rig and would like to simply check from a single laptop that the fixtures are operational. It may also be useful for uncomplicated and remote control of architectural lights, where the output levels of the fixtures will not change very much, nor rapidly, over the course of the day.



## RDM CONTROLLER

### Discover RDM devices

To discover all the RDM devices connected to a particular port, hover over the port icon and click "Discover". This will initiate a full discovery and automatically retrieve information for all discovered devices.



After the first full discovery is initiated, background incremental discoveries will be run periodically to check if there are any new devices connected to the rig.

## Setting everything up on the screen



Drag and drop the devices' icons to reflect a setup that makes sense for you. For example, you may want to set it up such that the positions on the screen reflect the actual positions on the rig, for easy monitoring.

To select multiple icons at once, switch this mode on/off with the pan/multi-select button.

## Identify devices

There is a dedicated on/off "Identify" button for every RDM device connected to locate them in the real world. The responses vary from device to device, for example, a fog machine may output some fog, and a colour scroller may start scrolling through all its colours. To turn "Identify" off, simply click on the same button again.



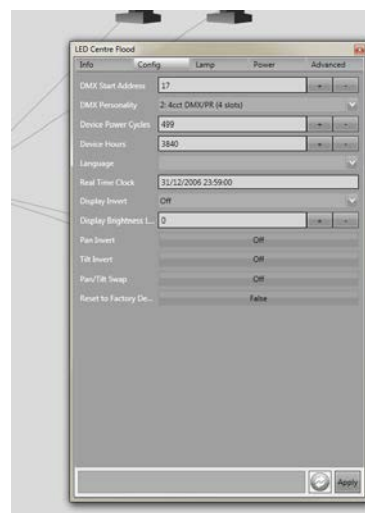
## Monitor and configure devices

### Device Information



To see a complete list of all the information reported by the device, hover over the icon and click on the "Settings" button. The values are automatically updated from the device every time the window is opened, ensuring that what you see are the latest values and settings.

Some of the device settings may be configurable – in this case, simply click "Apply" once you have edited the values. These values are then received and stored or processed by the device directly. This means that if the Browser software is closed or the device is disconnected from the dongle, the values and settings on the fixtures will remain unaffected.



### Sensors




From this window, you can monitor all the information reported by the device's sensors. These values are regularly updated through background polling to request for the latest reading from all devices in a round-robin fashion.

If supported by the device, you can record the current value to compare to a later reading, as well as reset a previously recorded value. These values will be stored in the device's memory, not in the dongle. This means that if the software is closed or the device is disconnected from the dongle, the values and settings on the fixtures will remain unaffected.

If the device also reports a normal operating range, this will be displayed as a green bar. When the current value (indicated by the arrow) exceeds this range, an alert will be raised in the main screen in the form of a circle overlay on the device's icon. You can therefore simply leave the software running on your computer and be automatically alerted without having to worry about manually checking every sensor for every device.

## Status messages



 Your device may report status messages regarding its current status, providing feedback to a command received, or flag a warning/alert. These will be listed in the status messages window, which you can open by hovering over the device's icon and click on "Status Messages".

To view a consolidated list of status messages of all devices connected to a port, hover over the port icon and click on “Status Messages”.

The screenshot shows a window titled 'Status' with a table containing three rows of error messages. The first row has a timestamp '1/11/2012 1:20:59 PM' and the message 'Error from Root: 5 Volts'. The second row, which is highlighted in blue, has a timestamp '1/11/2012 1:21:21 PM' and the message 'Error from Root: 5 Volts'. The third row has a timestamp '1/11/2012 1:21:42 PM' and the message 'Error from Root: 5 Volts'. Below the table is a large empty rectangular area. At the bottom left is a button with a red 'X' icon and the text 'Clear Status Messages'. At the bottom right is a button with a red 'X' icon and the text 'Close'.

TimeStamp	MessageToDisplay
1/11/2012 1:20:59 PM	Error from Root: 5 Volts
1/11/2012 1:21:21 PM	Error from Root: 5 Volts
1/11/2012 1:21:42 PM	Error from Root: 5 Volts

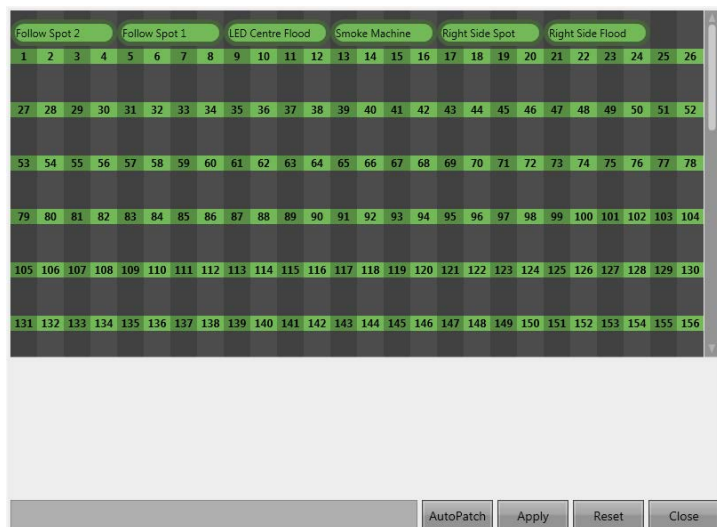
Each new and unacknowledged status message will be flagged as an alert in the main screen in the form of a circle overlay on the device's icon. In addition, they will appear as bold in the status message window until you have acknowledged them. They can also be deleted from the view to unclutter the list, however, this is simply deleting them within the Browser software, and not the device itself.

## Patching over RDM



To remotely patch the devices over RDM, hover over the port icon and click on the “Patch” button. The Patch window shows a map of the channels and the devices assigned to them.

You can manually assign DMX channels by dragging and dropping devices to the desired channels, and clicking “Apply”. When a device is being selected and dragged but not dropped, an “Identify” RDM command will be sent to the device, to allow mapping of the device on the screen to the real one on the rig.



Alternatively, you can choose to use the Autopatch functionality, which will automatically patch devices in increasing DMX channels. The total

DMX footprint of all devices connected to one port should be less than or equal to 512 when attempting Autopatch, otherwise it will fail.

## Alert window

Should the software encounter any issues on the RDM line, such as incorrectly formatted RDM packets or unexpected responses, these will be flagged up in the Alert window. This is intended to prevent unexplainable crashing of software, while providing useful diagnostic information for engineering support.



## Full Screen

Full screen mode can be toggled with this button.



# Troubleshooting

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## I cannot connect to the dongle over Ethernet

1. Check that the Ethernet cable is securely connected and that the device has power.
2. Some laptops and most desktop computers have an Ethernet “link” (green) and “activity” (yellow/amber) LEDs. Check that the link LED is solidly lit and the activity LED blinks from time to time. If not:
  - Check that the Ethernet adaptor is not disabled in Windows.

Open *Control Panel*

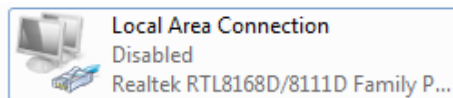
### Windows Vista/7

Go to “*Network and Sharing Center*” or “*View network status and tasks*” then “*Change adaptor settings*”

### Windows XP

Go to “*Network Connections*”

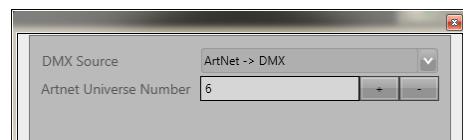
If the adaptor looks as follows (disabled), double click to enable it.



- Replace the Ethernet cable
3. Check that the IP address of the dongle and the computer are in the same range. See earlier section on IP Addressing.
  4. If you are connecting through a switching hub, try to connect the dongle directly to the computer.

## There is no DMX output from the dongle

1. Check that the device has power.
2. Check that the DMX Source setting of the port is as expected, given the input being fed in and your desired output.



This window can be accessed from the

button



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Document Revision: 3  
Last Modified: 18-OCT-2012 (Pavee Tansirikongkol)

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